CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No: CTCE/BBMP/KRIDL/W.No.13/BM/AIV/2017-18 10.04.2018

TEST REPORT ON IMPACT VALUE OF AGGREGATES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	: Improvements of asphalting at Ashwathkatte surrounding area in Mallasandra Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	: BBMP/EE/DD/WO/220/2017-18 Dated: 07.02.2018
* Sample ID	: Hot Mix Plant, Bangalore
Technical Reference	: IS : 2386(Part -4)-1963 (RA-2011)
* Type of Mix	: Bituminous Macadam
Date of Testing	: 10.04.2018

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	379	382	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	84	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	297	298	
4	Aggregate Impact value = percent fines 100* (W2/W1)%	21.64	21.99	21.81

* Information is furnished by the Customer/Representative.

Comments:

Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

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Job No.: CTCE/BBMP/KRIDL/W.No.13/BC/Shape.T/2017-18 10.04.2018

TEST REPORT ON FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Improvements of asphalting at Ashwathkatte surrounding area in Mallasandra Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/220/2017-18 Dated: 07.02.2018
* Sample ID	:	Hot Mix Plant, Bangalore
Technical Reference	:	IS : 2386(Part -1)-1963 (RA-2011)
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	10.04.2018

Sl.No.	Description	Result
1	Flakiness Index	11.55%
2	Elongation Index	13.85%
3	Combined Flakiness & Elongation Index	25.40%

*Information is furnished by the Customer/Representative.

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Comments:

⇒Maximum allowable Flakiness & Elongation Index for Bituminous Macadam is 30%

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Job No: CTCE/BBMP/KRIDL/W.No.13/BM/Stripping/2017-18 12.04.2018

TEST REPORT ON STRIPPING VALUE OF ROAD AGGREGATE (STATIC IMMERSION TEST)

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Improvements of asphalting at Ashwathkatte surrounding area in Mallasandra Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/220/2017-18 Dated: 07.02.2018
Technical reference	:	IS: 6241
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	12.04.2018

Type of binder	: 60/70
Percentage of binder used	: 5.0% by wt.
Total weight of aggregate	: 200 g
Total weight of binder	: 10.0 g
Temperature of water-bath	: 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.1	3.20	96.80
2	3.2		
3	3.3		

*Information is furnished by the Customer/Representative.

Comments:

→ Minimum allowable Aggregate retained coating for Bituminous Macadam is 95%

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Job No: CTCE/BBMP/KRIDL/W.No.13/BM/Sp_Wa/2017-18 12.04.2018

TEST REEPORT ON SPECIFIC GRAVITY AND WATER ABSORPTION

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Improvements of asphalting at Ashwathkatte surrounding area in Mallasandra Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/220/2017-18 Dated: 07.02.2018
Technical reference	:	IS : 2386(Part -3)-1963 (RA-2011)
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	12.04.2018

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 2	
1	Weight of aggregate suspended in water with the basket	W_1 g	2002	2003	2004	
2	Weight of basket suspended in water	W_2 g	750	750	750	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1252	1253	1254	
4	Weight of saturated surface dry aggregate in air	W_3 g	2006	2007	2008	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	754	754	754	
6	Weight of oven dried aggregate	W_4 g	1996	1998	2000	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.647	2.650	2.653	2.650
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.683	2.682	2.681	2.682
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.50%	0.45%	0.40%	0.45%

Information is furnished by the Customer/Representative.

Comments:

⇒ Maximum allowable Aggregate Water absorption value for Bituminous Macadam is 2.0%

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Job No.: CTCE/BBMP/KRIDL/W.No.13/BM/Bitumen/2017-18 12.04.2018

TEST REPORT ON BITUMEN CONTENT DETERMINATION OF BITUMINOUS MACADAM MIX

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of work	:	Improvements of asphalting at Ashwathkatte surrounding area in Mallasandra Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/220/2017-18 Dated: 07.02.2018
* Sample ID	:	Roads around Ashwathkatte area in Mallasandra, Ward No.13
Technical Reference	:	IRC:SP:11-1984
Date of Testing	:	12.04.2018

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	482	481.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	18	18.50
7. Bitumen content in %	3.60	3.70
8. Average	3.65	

* Information is furnished by the Customer/Representative.

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